

PATENT APPLICATION OF
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FOR
CONNECTOR MEANS

BACKGROUND-FIELD OF INVENTION

The present invention relates generally to a means to connect two sections of a container. More specifically the present invention is a means to retain the two sections of a container after it is opened and still allows air to enter the container.

BACKGROUND-DESCRIPTION OF RELATED ART

Numerous containers have opening means that will result in a separate piece of the container being separated either completely or partially from the remainder of the container to allow entry of atmospheric air into the container. Containers with these opening means are disclosed in US Patent Number 5,702,035 and US Patent Application Numbers 09/973,637 and 10/068,678. The opening means on these containers will result in a small section of the

container either completely broken off or remain partially connected to the remainder of the container by a small quantity of material.

If the section of the container is completely broken off, it will have to be discarded. The small section of the container that is completely broken off also risks being ingested by small children and pets. If the section of the container is not broken off completely but remains partially connected to the remaining section of the container it risks being pulled off and is undesirable. Therefore, a means is desired to allow the opening means to operate as designed and yet will retain the separated piece of the container on the remainder of the container so there are no loose sections of the container to be disposed of.

SUMMARY OF THE INVENTION

The present invention is a connector means to hold the two sections of a container together after opening yet still allows entry of atmospheric air into the container. The preferred embodiment of the connector means comprises of a small short section of flexible material that is inserted into the container and positioned at the opening means of the container. The connector means has multiple channels in its longitudinal direction around its circumference to allow entry of air into the container once it is opened. The connector will retain the two sections of the container together after opening yet allows entry of air into the container. In another embodiment of the connector means the container is inserted into a short cylindrical section of flexible material with the connector means positioned at the opening means wherein said connector means has multiple elongated openings around its circumference to allow entry of air into the container once it is opened.

BRIEF DESCRIPTION OF THE DRAWINGS

Figure 1 shows the preferred embodiment of the connector means.

Figure 1A shows an enlarged perspective view of the connection means shown in figure 1.

Figure 1B shows an enlarged perspective view of another embodiment of the connector means shown in figure 1.

Figure 2 shows another embodiment of the connector means.

Figure 2A shows the assembled connector means shown in figure 2.

Figure 3 shows another embodiment of the connector means.

Figure 3A shows the assembled connector means shown in figure 3.

Figure 4 shows another embodiment of the connector means.

Figure 5 shows another embodiment of the connector means.

Figure 5A shows the cross-sectional view of the connector means shown in figure 5.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Figure 1 shows the preferred embodiment of the present invention. In the preferred embodiment, the connector means 1 comprises of a short section of flexible material with multiple longitudinal channels 2 along its perimeter. The multiple longitudinal channels 2 may be as shown in figure 1A or 1B. Figure 1A shows a connector means 1 with three channels 2 equally spaced around the circumference of the connector means 1. Figure 1B shows a connector means 1 with multiple channels 2 equally spaced around the circumference of the connector means 1. The connector means 1 is inserted into an elongated cylindrical container 3 with an opening means 4 that will cause a section of the container 3 to be broken off either completely or partially. The connector means 1 is positioned at the opening means 4 to retain the

section of the container that will be broken off. When a section of the container is broken off, the connector means **1** will retain that section and still allow entry of air into the container **3** through the multiple longitudinal channels **2** along its perimeter.

Figure 2 shows another embodiment of the connector means. In this embodiment, the connector means **5** comprises a short cylindrical section of flexible material with multiple elongated openings **6** around its circumference. The connector means **5** is placed around the opening means **7** of an elongated cylindrical container **8** with the multiple elongated openings **6** positioned over the opening means **7** as shown in figure 2A. When a section of the container **8** is broken off either completely or partially, the connector means **5** will retain the section of the container that is broken off and still allow entry of air into the container **8** through the multiple elongated openings **6**.

Figure 3 shows another embodiment of the connector means. In this embodiment, the connector means **9** comprises a cap made of flexible material with multiple elongated openings **10** around its circumference. The connector means **9** is placed over the end of the elongated cylindrical container **11** covering the opening means **12** of said container **11** as shown in figure 3A. When a section of the container is broken off either completely or partially, the connector means **9** will retain the section of the container that is broken off and still allow entry of air into the container **11** through the multiple elongated openings **10**.

Figure 4 shows another embodiment of the connector means. In this embodiment, the connector means **13** comprises a short section of material with a reduced section **14** and an elongated protrusion **15** in the form of a toothpick at one end. The connector means **13** is inserted into an elongated cylindrical container **16** with the reduced section **14** positioned at the opening means **17** of the container **16** and with the elongated protrusion **15** directed away from

the section of the container that will be broken off either completely or partially. The connector means **13** will retain the section of the container that will be broken off and still allow entry of air into the container **16** through the reduced section **14**. The connector means **13** may be affixed to the section of the container that will be broken off and when it is pulled out along with the broken off section of the container, the elongated protrusion **15** of the connector means **13** will be exposed and can be used as a toothpick.

Figure 5 is another embodiment of the connector means. In this embodiment, the connector means **18** comprises a short section of material with an elliptical profile, as shown in figure 5A, and an elongated protrusion **19** in the form of a toothpick at one end. The connector means **18** is inserted into an elongated cylindrical container **20** and positioned at the opening means **21** with the elongated protrusion **19** pointed away from the section of the container that will be broken off. The connector means **18** will retain the section of the container that will be broken off either completely or partially and still allow entry of air into the container **20** from the gap between the elliptical profile of the connector means **18** and the cylindrical container **20**. The connector means **18** may be affixed to the end of the connector that will be broken off and be pulled out along with the broken off section of the container to expose the elongated protrusion **19** for use as a toothpick.

Although the description above contains many specificities, these should not be construed as limiting the scope of the invention but as merely providing illustrations of some of the presently preferred embodiments of this invention. Thus the scope of the invention should be determined by the appended claims and their legal equivalents, rather than by the examples given.